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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,497	05/31/2006	Michael Stroder	20941/0211429-US0	4218

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LEYDIG, VOIT AND MAYER
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601

EXAMINER	
GRAVINI, STEPHEN MICHAEL	
ART UNIT	PAPER NUMBER
3743	

MAIL DATE	DELIVERY MODE
05/25/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,497	STRODER ET AL.	
	Examiner	Art Unit	
	Stephen M. Gravini	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 6-15,24 and 25* is/are rejected.

7)☒ Claim(s) *2-5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20100127*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1, 6, 10-13 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 5,374,413) in view of van Slooten (US 4,992,245) in view of Chen et al. (US 5,234,526). The claims are reasonably and broadly construed, in light or the accompanying specification, to be disclosed by Kim as comprising:

feeding microwave radiation from a microwave source into the fluidized-bed reactor (column 6 line 54 through column 7 line 12 and column 7 lines 38-57), introducing from below a first gas or gas mixture is introduced from through at least one gas supply tube into a mixing chamber of the fluidized-bed reactor (figure 1 and column 7 line 58 through column 8 line 45), the at least one gas supply tube **20** being at least partly surrounded by a fluidized bed which is fluidized by supplying fluidizing gas (column 8 line 46 through column 9 line 2), and supplying the microwave radiation to the mixing chamber through the at least one gas supply tube **17** (column 9 line 58 through column 10 line 51). Kim also discloses the claimed adjusting the solids in the reactor have a bed height such that the annular fluidized bed extends beyond the upper orifice end of the gas supply tube and that solids are constantly introduced into the first gas or gas mixture and entrained by the gas stream to the mixing chamber located above the orifice region of the gas supply tube (column 10 line 52 through column 11 line 6) wherein solids discharged from the reactor and separated in a downstream separator

are at least partly recirculated to the annular fluidized bed of the reactor (figure 2 and column 13 lines 33-58). Kim discloses the claimed invention, except for the claimed stationary annular fluidized bed. Van Slooten, another fluidized bed microwave method, discloses that feature at column 8 line 50 through column 10 line 12. It would have been obvious to one skilled in the art to combine the teachings of Kim, with the stationary annular feature of van Slooten, for the purpose of optimizing the microwave treatment of granular solids for an efficient use of energy. Furthermore, Kim in view of van Slooten discloses the claimed invention except for the specific microwave frequencies, adjustable wave guide cross section, or fluidized bed temperatures. It would have been an obvious matter of design choice to recite those features, since the teachings of Kim in view of von Slooten would perform the invention as claimed, regardless of the frequency, adjustable cross section, or temperature. Kim in view of van Slooten, discloses the claimed invention, except for the claimed at least one gas supply tube is a wave guide. Chen, another method for treating solids, discloses that feature at column 9 lines 17-33. It would have been obvious to one skilled in the art to combine the teachings of Kim in view of van Slooten, with the gas supply tube wave guide disclosed in Chen for the purpose of gas treatment in an effective manner.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of van Slooten in view of Chen in view of Hardwick et al. (US 4,490,287). Kim in view of van Slooten in view of Chen discloses the claimed invention, as rejected above, except for the claimed feature of wherein the microwave radiation is introduced through a gas supply tube constituting a wave guide and/or through a wave guide arranged in

the gas supply tube, wherein the microwave radiation is introduced through a plurality of wave guides, each wave guide being provided with a separate microwave source, wherein purge gas is passed through the wave guide. Hardwick, another fluidized bed method, discloses that feature at column 7 line 30 through column 8 line 38. It would have been obvious to one skilled in the art to combine the teachings of Kim in view of van Slooten in view of Chen, with the wave guide arrangement of Hardwick, for the purpose of optimizing microwave energy in granular solids for an efficient fluidized bed treatment.

Double Patenting

Claims 1-15 and 24-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/540,433. Applicants' copending application claims the same invention as the present application, except for the claimed inclination angle. It would have been an obvious matter of design choice to recite an angle, since the present application would perform the copending claimed invention regardless of the angle

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Applicants' arguments filed March 22, 2010 have been fully considered but they are not persuasive.

obviousness

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, examiner has been instructed to construe claims such that if a feature claimed is found in the prior art, it is reasonable to construe that claim such that the prior art can be used to reject the claim. For example if a prior art reference directed to a refrigerator drawer and another directed toward a kitchen cabinet, then it would be reasonable to use those prior art references to reject a laundry clothes dryer drawer.

With respect the to wave guide features of the tubes, it is reasonable to construe the claims such that the tubes meet the wave guide claim limitation because both the claimed invention and the prior art have the same structure and function, specifically as disclosed in Kim in view of van Slooten in view of Chen, rejected above.

In response to the priority date of Stroder, that rejection has been withdrawn based on applicants' arguments.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other prior art references cited teach one or more features of the claimed invention but are not relied upon in rejecting the claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Gravini whose telephone number is 571 272

4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth B. Rinehart can be reached on 571 272 4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Gravini/
Primary Examiner, Art Unit 3743